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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,922

01/11/2007

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EXAMINER

ANGADI, MAKI A

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

01/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,922	Applicant(s) MAXIMOVSKY ET AL.	
	Examiner MAKI A. ANGADI	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/24/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 8 are rejected under 35 U.S.C. 102(b) as being anticipated over Inoue (US Patent No. 4,511,595).

As to claim 1, Inoue discloses a method which reads on the process of producing a metal or metallized image on a workpiece or substrate or sheet material such as silica board (3) (Fig.1) (col.1, lines 65-68 and col.8, lines 9-10); applying or depositing a metal onto a selected area of the sheet material (col.2, lines 45-53) and exposing it at a specified points to a means for irradiating a localized area (col.2, lines 48-50) that provides their fixation at said points (col.2, lines 50-52), the method discloses the process of applying a solution containing a salt of the metal (col.4, lines 55-58 and col.8, lines 25-30) onto the sheet material and impregnating the sheet material with solution (col.4, lines 55-58 and col.8, lines 28-36) causing extraction of the metal from the solution at specified points of surface of the sheet material, and forming a image from a combination of metallized points (col.8, lines 41-53).

As to claim 2, Inoue discloses a method that reads on the process of extraction of metal from the solution (col.8, lines 23-25) by electromagnetic radiation pulses provided by a laser (12) (Fig.2) which are focused on the specified points by a laser beam (11) of the sheet material surface (3a) (col.5, lines 6-20).

As to claim 3, Inoue discloses that the electromagnetic radiation in the form of a thermal laser beam, cause laser radiation pulses to reduce, in the solution, metal ions of the metal at the specified points of the workpiece or sheet material (col.5, lines 6-20).

As to claim 4, Inoue discloses a method which reads on the process of controlling the duration of the electromagnetic radiation pulses in the form of laser pulses (col.5, lines 28-33) and size of the laser beam spot down to twice the wavelength of the beam for printing-type deposition wiring of tiny electronic device and high precision localized deposition (col.7, lines 18-22) so that one can avoid the burn of the sheet material.

As to claim 5, Inoue discloses a method of forming recesses in the workpiece or sheet material under the action of laser radiation (electromagnetic radiation) by selectively activating the interface to enhance the chemical-depositability of the metal from the solution at their bottoms (Fig.2) (col.5, lines 8-

Art Unit: 1792

12 and col.8, lines 23-28), and forming an image or pattern from a combination of metallized deepened into the body of the workpiece or sheet material (col.8, lines 46-60).

As to claim 6, Inoue discloses the process of preparing a solution in which several metal salts are present (col.8, lines 23-28), depositing simultaneously all the metals present in the solution at each of the specified point of the workpiece of sheet material (col.8, lines 38-49) and forming metal alloys or doped metals (col.9, lines 3-14).

As to claim 7, Inoue discloses the use electromagnetic radiation in the form of carbon-dioxide laser (claim 18), argon gas laser (claim 17) with pulses of different duration (col.5, lines 46-49).

As to claim 8, Inoue discloses a device for applying a metallized image (Fig.1) on a sheet material or workpiece or substrate (col.3, lines 66-67) comprising a means (6) positioned in front of the workpiece (3) for applying a metal onto the workpiece (col.4, lines 55-58) and a means for fixing the metal to the sheet material at specified points (col.4, lines 59-66), device being characterized in that the means for applying the metal onto the sheet material is made as a reservoir with solution (6) (col.4, line 6) containing a salt of the metal (col.8, lines 23-28) and as a fixture for impregnating the sheet material with said solution (col.8, lines 30-36), and the means for fixing the metal to the sheet

Art Unit: 1792

material or workpiece is made as a generator laser radiation pulses (12a) (Fig.7) and as a unit for focusing pulses of specified points at a surface of the workpiece (3) to extract the metal from the solution (col.7, lines 42-49).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Garcia et al. (US Patent No. 3,835,780) discloses a process of printing by driography.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAKI A. ANGADI whose telephone number is (571)272-8213. The examiner can normally be reached on 8 AM to 4.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

Art Unit: 1792

free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maki A Angadi/
Examiner, Art Unit 1792

/Binh X Tran/
Primary Examiner, Art Unit 1792